Office of Chief Counsel
Internal Revenue Service

memorandum

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date: March 10, 2000

to: District Director, Illinois
Attn: Alex Christopher, Case Coordinator E:1213

from: District Counsel, Illinois CC:MSR:ILD

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subject: Prototype Research & Experimental Expenditures

Taxpayer: [redacted]
EIN: [redacted]
Years: [redacted]

I. Issues:

What is the proper treatment under I.R.C. § 174 of the costs of materials and labor used by the taxpayer in the construction of prototype components of an automotive engine to be sold to third party customers?

II. Conclusions:

The acquisition cost of the engine, including all existing components, should be capitalized and depreciated. The cost of fabricating new or replacement parts, components, or parts of components are deductible, including material and labor costs. The costs of modifying existing components are deductible.

III. Facts

[redacted] is a manufacturer of [redacted] equipment, including [redacted] and [redacted] equipment. In order to improve the engines it manufactures, it builds prototype engine components and tests them, using pre-existing engines pulled from inventory. The taxpayer might modify an existing component of the engine, or replace a component with an entirely new component, fabricated from scratch. Sometimes the prototype being tested is an integral part of the engine, without which the engine will not operate, while sometimes the prototype is not part of the engine, but cannot be tested without being hooked up to an engine.

The prototype components ordinarily compose about 15% of an engine. Whenever there is a 25% or more component change in a product, the taxpayer considers it a major change which requires high level approval within the corporation.

IV. Discussion

I.R.C. § 174 permits deduction of the costs of research or experimental expenditures as current expenses. Absent that section, the costs to which it refers are ones which would be charged to a capital account. What § 174 seeks to do is permit some, but not all, of these costs to be treated as expenses. The qualifying costs can be deducted in the year incurred, or deferred and amortized. Treas. Reg. § 1.174-1.

Under § 1.174-2(a), the term "research or experimental expenditures" refers to costs "incident to the development or improvement of a product." To be deductible, the costs must be research or experimental expenditures in the laboratory sense. They must be directed at the "development or improvement" of a "product." The term "product" is broadly defined to include both tangible and intangible assets, and includes assets used in the taxpayer's trade or business, as well as things that it sells, leases, or licenses. § 1.174-2(a) (1) & (2).

In this case, the product involved is the engine, or in many instances, the components of an engine which the taxpayer sells separately. The deductible expenditures are those which develop or improve the engine or component. The acquisition cost of the engine or component itself is not incident to its development (it has already been developed) or improvement (because it has not yet been improved.) It is only those costs which are intended to result in the modification or alteration of the pre-existing product, i.e., the engine or component, that can be classified as deductible.

In general, costs involved in constructing a prototype are deductible expenses under § 174. *See* Rev. Rul. 69-484, 1962-2 C.B. 38 (payments made by an airline transportation company to an airline manufacturer that will design, develop, fabricate, and test prototype aircraft constitute research and experimental expenditures.) *See also* Rev. Rul. 75-122, 1975-1 C.B. 87 (expenditures for development of prototype mining equipment.)

You have suggested that cost of fabricating a new "prototype"component is not deductible pursuant to § 174(c), which limits the § 174 deduction to costs which are not for land or other property "of a character which is subject to the allowance under § 167 (relating to allowance for depreciation, etc.)"

The requirements of § 174(c) are implemented by § 1.174-2(b). Sections 1.174-2(b)(1) and 1.174-(b)(2), read together, cover the treatment of both previously existing assets and "end product" assets.

Section 1.174-2(b)(1) provides that if the costs relating to research on one asset are for the acquisition or improvement of a different asset which is a depreciable asset, the acquisition costs are not deductible, and any improvement costs are deductible only if they are research or experimental costs relating to the asset being acquired. Thus, costs for depreciable asset A are not turned into immediately deductible ones merely because asset A is used in research on a product; rather, the costs must be for research on asset A itself in order to be immediately deductible.

A taxpayer's expenditures for the acquisition or improvement of property which is subject to an allowance for depreciation under § 167 are not deductible under § 174, irrespective of the fact that the property or improvements may be used by the taxpayer in connection with research or experimentation. Treas. Reg. § 1.174-2(b)(1). Expenditures for research or experimentation which result, as an end product of the research or experimentation, in depreciable property to be used in the taxpayer's trade or business may, subject to the limitations of Treas. Reg. § 1.174-2(b)(4), be allowed as a current expense deduction under § 174(a). The deductions for expenditures in connection with the acquisition or production of depreciable property to be used in the taxpayer's trade or business are limited to amounts expended for research or experimentation and do not include the costs attributable to the construction of the property. Treas. Reg. § 1.174-2(b)(4).

Two types of expenses are implicated by these rules: (1) expenses incurred for activities intended to discover information that would eliminate uncertainty concerning the development or improvement of a product (Treas. Reg. § 1.174-2(a)(1)); and (2) expenses attributable to the component material, labor, or other elements involved in the construction and installation of a product. The former type of expenses, to the extent they can be traced to activities intended to discover information that would eliminate uncertainty concerning the development or improvement of a product, are deductible for purposes of § 174. The latter type of expenses, to the extent they represent costs for the construction of a depreciable asset, are not deductible. See Ekman v. Commissioner, T.C. Memo. 1997-318, aff'd, 184 F.3d 522 (6th Cir. 1999). Cf. Rev. Rul. 73-275, 1973-1 C.B. 134 (holding that costs attributable to the development and design of an automated manufacturing system, as distinguished from costs attributable to the production of the manufacturing system, are deductible under section 174).

Section 1.174-2(b)(2) covers assets which are an "end product" of the research. Although not written in this form, the effect of this subsection is to allow a § 174 deduction for costs of depreciable end product assets, unless they are used in the taxpayer's trade or business (i.e., placed into service.) If they are placed into service, the cost of materials and labor must be capitalized under § 1.174-2(b)(4). The implication of this subsection of the regulations is that if an end product is not placed into service, the exception of § 1.174-2(b)(4) does not come into play, and material and labor cost does not have to be capitalized.

Consequently, we do not agree with the argument that the taxpayer should be required to capitalize costs of material and labor used in fabricating or modifying prototype components which by their nature cannot be considered to be the final product. The acquisition cost of the engine, including the acquisition of all existing components, should be capitalized and depreciated, but the cost of fabricating or modifying new or replacement parts, components, or parts of components are deductible, including material and labor costs.

This advice has been coordinated informally with Joni Larson in our national office.

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District Counsel

By: _____
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